

## **ABSTRACT**

### **BACKGROUND AND OBJECTIVES :**

Umbilical and para umbilical hernias account for approximately 5% of all primary hernias. Both these types of hernias have received little attention in comparison with other types of hernias of the abdominal wall. There are different methods of surgical repair of which the open technique is commonly employed. My study was undertaken to compare the efficacy and advantages of the Single port laparoscopic surgery over other conventional multiport laparoscopic repair in the treatment of umbilical and paraumbilical hernias and in appendicectomy in patients seeking treatment at Government Rajaji Hospital, Madurai.

### **METHODS:**

A prospective comparative study for a duration of 6 months from January 2017 to September 2017 was undertaken in patients presenting with umbilical hernia and appendicitis in the OP and casualty of Department of General Surgery at Government Rajaji Hospital, Madurai. A total of 50 patients were recruited for the study based on the eligibility criteria and the informed consent. Relevant data regarding history, clinical examination and investigations were collected and properly recorded. The patients would then be divided into two groups with one group undergoing single port laparoscopic surgery and the other undergoing multiport laparoscopic surgery.

The patients were then followed up into the intra operative and post operative period and daily progress cards maintained. The study subjects are then carefully followed up in terms of various aspects like Operative time, duration of stay in hospital, post operative pain, development of any post operative infections, complications, complaints of constant pain or sensory disturbances and also for recurrences.

The data were analysed at the end of the study and observations were noted down and conclusions made regarding the efficacy of the two types of surgical repair techniques.

In my study, a total of 50 patients who were admitted as a case of either ventral hernia or appendicitis in the Surgery Department of Government Rajaji Hospital, Madurai were selected. The patients would then be divided into the Case group (those who would undergo single port Laparoscopic surgery) and control group (those who would undergo multiport surgery) after they satisfy the eligibility criteria laid out.

The patients were then divided into four groups based on the repair they underwent.

GROUP I : Patients who underwent single port ventral hernia repair

GROUP II : Patients who underwent multi port ventral hernia repair

GROUP III : Patients who underwent single port appendectomy

GROUP IV : Patients who underwent multi port appendectomy

In general, the comparisons were made between the single incision Laparoscopic surgery and multi port laparoscopic surgery based on various parameters which are enlisted below:

#### **PARAMETERS ASSESSED:**

- 1) Operative time of the procedure
- 2) Pain assessed by the Numeric Pain Rating Scale
- 3) Wound infections
- 4) Cosmetic appearance of scars
- 5) Post-operative day of discharge.

#### **ASSESSMENT OF OUTCOME**

Assessment of outcome is done with a Quality of Life (QOL) assessment scoring system with:

- 1) EuraHS-QOL( European Hernia Society Scale)
- 2) Pain Rating Scale

This provides for an objective assessment of outcome while comparison in both the single and multiport laparoscopic surgery groups.

## **SUMMARY**

The repair of ventral hernia is still a challenge to various surgeons around the world.

Umbilical hernias generally develop from small fascial defects. Because of their size, a common practice is to repair the defect in the open method with primary sutures with the patient under regional anesthesia. Recurrence rates of up to 15% have been associated with this technique to which effect was repair tried with prosthetic materials. And open appendectomy has many complications than laparoscopic appendectomy

### **What does Laparoscopic repair offer in this regard?**

The Laparoscopic technique for ventral hernia and appendectomy has resulted in decreased postoperative pain and length of stay, shorter RTNA, and lower recurrence rates.

And single incision laparoscopic surgery is a recent advance in laparoscopic Surgery which has added advantages than other conventional laparoscopic Surgery which require working inline with camera which make movements this difficult to perform .but can be overcome by using articulating or roticulating instruments .the advantage of single incision laparoscopy over multi port can be maintained if two things are followed ,mainly the patient selection and recognizing the limitation of single incision laparoscopic surgery.

### **Advantages of single port vs multiport laparoscopic surgery :**

1. Decreased post operative pain
2. Decreased duration of stay in hospital
3. Decreased wound complication
4. Better cosmesis.

## **CONCLUSION**

1. post operative pain is less in single port laparoscopic surgery when comparing multiport laparoscopic surgery.
2. decreased duration of stay in hospital in the post operative period and early return to normal activity .
3. decreased wound complications.
4. and the main advantage is the patient satisfaction of the cosmetic appearance of the scar .

## **KEY WORDS:**

Umbilical hernia ,paraumbilical hernia, single incision laparoscopic surgery,multi port laparoscopic surgery.